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G006-1

The lead agencies have reviewed the NEPA CEQ Guidelines and the State CEQA Guidelines concerning recirculation and have determined that the changes to the proposed Project and associated information that has been included in the document since the Revised Draft EIR was recirculated in March 2006 do not meet the criteria listed specifically in section 15088.5(a)(1-4) of the State CEQA Guidelines; therefore, the lead agencies believe recirculation is unwarranted.

May 9, 2006

Dwight E. Sanders
 California State Lands Commission
 100 Howe Avenue, Suite 100-South
 Sacramento, CA 95825

Re: Comments of Clearwater Port, LLC on the Revised Draft Environmental Impact Report for the Cabrillo Port Liquefied Natural Gas Deepwater Port (State Clearinghouse Number: 2004021107)

Dear Mr. Sanders:

Clearwater Port, LLC ("Clearwater Port" or "Clearwater"), a wholly owned subsidiary of NorthernStar Natural Gas Inc. submits the following comments on the Revised Draft Environmental Impact Report for the Cabrillo Port Liquefied Natural Gas Deepwater Port (the "DEIR") (State Clearinghouse Number: 2004021107). As you know, the Clearwater Port project will convert existing Platform Grace to a state of the art LNG receiving and regasification facility. Clearwater welcomes this opportunity to provide these comments on the DEIR.

INTRODUCTION AND SUMMARY

In order to satisfy the requirements of CEQA, the DEIR must be revised and recirculated. Specifically, because the Revised DEIR did not correct substantive defects in the initial DEIR noted in the first round of public review in December of 2004, the DEIR must be further revised to properly respond to these issues and reissued for public review and comment.

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Section 15088.5 of the CEQA Guidelines clearly articulates the standard for recirculation of an EIR.¹ As described in the comments below, significant information has been omitted from

¹ A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. "Significant new information" requiring recirculation include, for example, a disclosure showing that:

- (1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
- (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
- (3) A feasible project alternative or mitigation measure considerably different from others previously analyzed

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the Revised DEIR, including, but not limited to, an accurate and consistent project description, the potential cumulative impacts of two or more LNG projects and other viable alternatives to the project and the project site:

- The DEIR's "Project Description," as that term of art is defined by CEQA, is incomplete and inaccurate. Specifically, the DEIR provides an ambiguous and contradictory description of the maximum output of the project. The contradictory characterizations of the project's maximum output fatally impair the analyses of the potentially significant impacts associated with the construction, operation, and maintenance of the project. (See Section I below.)
- The DEIR fails to analyze the potential cumulative impacts of the Long Beach project and the Clearwater project on the SoCalGas pipeline system as well as the resulting impacts on the environment. (See Section II below.)
- The DEIR uses storage, or the lack thereof, to reject a wide range of otherwise feasible alternatives. Such rejection is contrary to CEQA. Storage is not a basic project objective and thus not a valid basis for rejecting alternatives, including an existing platform-based terminal alternative. (See Section III below.)
- The DEIR improperly rejects for full consideration a reasonable range of feasible alternatives to the project and the project site. (See Section IV below.)

The omission of this information from the Revised DEIR has denied the public a meaningful opportunity to comment upon potentially significant adverse environmental effects of the project and feasible project alternatives. Recirculation is also required because the draft EIR is so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment has been precluded.

I. THE PROJECT DESCRIPTION IS INCOMPLETE AND INACCURATE BECAUSE IT FAILS TO ACCURATELY DESCRIBE THE DIRECT, INDIRECT, AND CUMULATIVE IMPACTS ASSOCIATED WITH THE CABRILLO PORT PROJECT'S MAXIMUM POTENTIAL OUTPUT.

CEQA requires the EIR and DEIR to contain an accurate, stable and finite project description. Specifically, under CEQA, the EIR must contain the following:

A statement of objectives sought by the proposed project. A clearly written statement of objectives will help the lead agency develop a

would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it. (4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (*Mountain Lion Coalition v. Fish and Game Com.* (1989) 214 Cal.App.3d 1043)

G006-1 Continued

G006-2

Section 1.0, "Introduction," has been updated to more clearly specify the throughput figures used in the environmental analysis. As stated, "Under normal operating conditions, the annual average throughput would be 800 million cubic feet per day; however, the Applicant has calculated that maximum operating scenarios would allow deliveries of up to 1.2 billion cubic feet per day, or the gas equivalent 1.5 billion cubic feet per day on an hourly basis for a maximum of six hours. These operating conditions would only be in effect if SoCalGas were to offer the Applicant the opportunity to provide additional gas in cases of supply interruption elsewhere in the SoCalGas system or extremely high power demand, for example, during hot summer days." In addition, applicable sections of the document have been updated similarly to clarify the throughput figures used in the analysis, including Sections 4.6, 4.7, 4.14, and 4.18.

G006-3

Section 4.20.1.3 contains information on the Sound Energy Solutions (SES) Port of Long Beach Onshore LNG Terminal and the Clearwater Port projects. Section 4.20.3 analyzes the potential cumulative impacts of these projects on the environment.

The Long Beach Board of Harbor Commissioners voted on January 22, 2007, to end the environmental review of a proposal by SES and issued the following statement: "After deliberation, based upon an opinion from Long Beach City Attorney Robert Shannon, who concluded that the Environmental Impact Report on the proposed LNG project 'is and in all likelihood will remain legally inadequate,' and since an agreement between Sound Energy Solutions and the City does not appear to be forthcoming, the Board of Harbor Commissioners disapproves the project and declines to pursue further negotiations" (Port of Long Beach 2007).

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Section 1.2, "Project Purpose, Need, and Objectives" states, "The Project would include storage capacity for LNG such that it would continuously supply natural gas to California." Section 1.2.5 contains additional information on this topic. Section 3.3.8 has been revised to clarify this issue with respect to the proposed Clearwater Port Project.

G006-5

Sections 1.2, 3.1, 3.2, 3.3.1, 3.3.2, 3.3.3, contain information on the

range of alternatives evaluated. Sections 4.10, and 4.10.1.3 contain information on California's Energy Action Plan, including the roles of energy conservation and renewable energy. Under NEPA and the CEQA, a reasonable range of alternatives must be considered. NEPA requires consideration of a "reasonable" number of alternatives. In determining the scope of alternatives, the emphasis is on "reasonable." "Reasonable" alternatives include those that are practical and feasible from the technical and economic standpoint and using common sense (CEQ 40 Questions; #2a). The information must be sufficient to enable reviewers and decision-makers to evaluate and compare alternatives.

The State CEQA Guidelines section 15126.6(a) provides, in part, "An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project."

The EIS/EIR initially evaluated 18 locations for the FSRU as potential locations for the deepwater port. It built on previous California Coastal Commission studies that evaluated nearly 100 locations. Sections 3.3.7 and 3.3.9 discuss alternate locations and technologies that were considered.

G006-6

See the response to Comment G006-1.

G006-7

Although the comment does not provide any specific justification for its conclusions, Section 1.2 states the purpose, need, and objectives of the Project. The Project has been modified since issuance of the March 2006 Revised Draft EIR. See Section 1.4.2 for a summary of Project changes. Chapter 2 has been updated and provides "a general description of the project's technical, economic, and environmental characteristics, considering the principal engineering proposals if any and supporting public service facilities" as required by 14 CCR 15124(c). Section 4.16.1 contains information on public services. Section 4.20 contains information on cumulative impacts. Chapter 6 contains a summary of all potential Project impacts and mitigation measures.

The environmental analysis is based on the throughput identified in Chapter 1, and the text in several sections has been clarified with respect to the impacts associated with the maximum throughput (see Sections 4.6, 4.7 and 4.14).

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G006-8
See the response to Comment G006-2.

reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project. (14 CCR 15124(b).)

G006-7
Continued

The DEIR must also contain “A general description of the project’s technical, economic, and environmental characteristics, considering the principal engineering proposals if any and supporting public service facilities.” (14 CCR 15124(c).)

California courts have recognized the need for a complete and accurate project description:

A curtailed or distorted project description may stultify the objectives of the reporting process. Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal’s benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal . . . and weigh other alternatives in the balance. An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR.’ [Citation.]” ([Sacramento Old City Assn. v. City Council \(1991\) 229 Cal. App. 3d 1011, 1023 \[280 Cal. Rptr. 478\]](#), original italics; [Stanislaus Natural Heritage Project v. County of Stanislaus \(1996\) 48 Cal. App. 4th 182, 201 \[55 Cal. Rptr. 2d 625\]](#).)

In this case, the DEIR for the BHP project fails to satisfy these fundamental CEQA requirements for a legally-sufficient project description and environmental analysis. Specifically, as discussed below, the DEIR fails to analyze the potential environmental impacts associated with the BHP Floating Storage and Regasification Unit’s (“FSRU”) potential maximum project output, focusing instead mainly on “daily average” or “annual average” output.

G006-8

A. The DEIR Provides an Ambiguous and Contradictory Project Description of the Maximum Output of the Project.

As we describe below, one of the most fundamentally important technical characteristics of any energy supply project is the projected maximum output of the project. The Draft EIR fails to describe the maximum output of the project in an accurate, stable or finite manner.

Virtually all references to the output of the BHP FSRU project are to the annual average or daily average output. The Executive Summary states that the “Project would deliver an

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annual average of 800 million cubic feet (22.7 million cubic meters [m3] per day)." (ES-33) Similarly, "Deliver an annual average of 800 MMcfd" is one of only three basic project objectives as defined by BHP. (P.1-13)

There are at least a dozen other references in the DEIR to an average annual or average daily output of 800 MMcfd.² In at least one instance, the DEIR refers to "the Project objective of supplying 800 MMcfd (22.7 million m3) of natural gas" without reference to an annual or daily average. (P. 1-1 to 1-2.)

While there are three references in the DEIR to a maximum daily output, these references are contradictory. At page 2-24 the DEIR states that "the maximum regassification capacity would be 1.5 billion cubic feet per day..." However, the "future/maximum design case" or "maximum capacity" of the plant is described as "1,200 MMscfd" at pages 4.7-51 and 4.7-61. Therefore, it is impossible to determine from the DEIR whether the maximum output of the FSRU will be 800 MMcfd, 1,200 MMcfd, 1,500 MMcfd or some other number. CEQA demands specificity and clarity in the project description.

This ambiguity in the DEIR is in marked contrast to other recently reviewed LNG projects. Each of these DEIS/EISs prepared for other LNG projects clearly -- and consistently -- identify the maximum output of the proposed projects:

SES Port of Long Beach LNG Project

The three stated objectives of SES' proposal are to:

- provide *up to 1 billion cubic feet per day* (Bscfd) of natural gas to southern California" (P.1-2; emphasis added.)³

Creole Trail

The facilities proposed by Creole Trail would import, store, and vaporize LNG and distribute, on average, approximately 3.3 billion cubic feet per day (Bcfd) of natural gas to markets in the United States, *with a total plant capacity of 3.8 Bcfd.*" (P. 1-1; emphasis added.)⁴

Port Arthur

Sempra states that the purpose of the [Port Arthur] Project is to:

G006-8 Continued

G006-9

Thank you for the information on the maximum output of other proposed LNG projects, which are expressed in like terms to the description of the throughput of the proposed Project within the March 2006 Revised Draft EIR. However, as indicated in response to Comment G006-8, additional clarification has been added resulting in greater specificity than shown in the provided examples.

The Long Beach Board of Harbor Commissioners voted on January 22, 2007, to end the environmental review of a proposal by SES and issued the following statement: "After deliberation, based upon an opinion from Long Beach City Attorney Robert Shannon, who concluded that the Environmental Impact Report on the proposed LNG project 'is and in all likelihood will remain legally inadequate,' and since an agreement between Sound Energy Solutions and the City does not appear to be forthcoming, the Board of Harbor Commissioners disapproves the project and declines to pursue further negotiations" (Port of Long Beach 2007).

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G006-9

² See, for example, P. ES-33; P. 1-1 to 1-2.; P. 1-13; P. 2-24; P. 2-30; PP. 2-42 to 2-43; P. 3-10; P. 3-29; and PP. 3-39 to 3-40.

³ Available at <http://www.ferc.gov/industries/lng/enviro/eis/10-07-05-eis.asp>

⁴ Available at <http://www.ferc.gov/industries/lng/enviro/eis/12-16-05-eis.asp>

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- allow access to LNG supplies and thus will provide a new, stable source of between 1.5 *and* 3.0 Bcf/d of natural gas to supplement the diminishing supplies while utilizing, to the extent practicable, the existing natural gas pipeline infrastructure within the Gulf of Mexico region of the U.S. (Page 1.3; emphasis added.)⁵

Compass Pass

The Proposed [Compass Pass] Deepwater Port facility would vaporize and send out, via a pipeline, *up to 1.2 Bcf/d* with an annual daily average of 1.0 Bcf/d.” (P. 2-36; emphasis added.)⁶

Weaver’s Cove

Weaver’s Cove Energy’s proposed facilities would transport *up to 800 million cubic feet per day (MMcfd)* of imported LNG to the United States market.” (P. ES-1; emphasis added.)⁷

Thus, in contrast to other LNG project descriptions that clearly articulate a single maximum output as the relevant yardstick for analyzing potential environmental impacts, it is impossible to determine from the Draft EIR for the BHP project whether the maximum output of the FSRU will be 800 MMcfd, 1,200 MMcfd, 1,500 MMcfd or some other number. The continual reference to average daily and average annual flows only serves to mask the potential peak environmental impacts and to compound the confusion for the reviewing public.

Without an accurate and consistent description of the maximum potential output of the project, it is impossible for the public, interested parties and public agencies to identify and analyze the significant environmental effects of the proposed project, consider appropriate mitigation measures, assess the advantages of terminating the proposal, analyze the cumulative impacts and properly weigh other alternatives. (*City of Santee v. County of San Diego, supra*, 214 Cal.App.3d at p. 1454.)

B. The Contradictory Characterizations of the Project’s Maximum Output Fatally Impair the Analyses of the Potentially Significant Impacts Associated With The Construction, Operation, And Maintenance of the Project.

For the purposes of analyzing the potentially significant impacts of the BHP project, the DEIR assumes an output capacity of 800 MMcfd. However, if the maximum output of the

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G006-10

See the response to Comments G006-2 and G006-9.

G006-11

See the response to Comment G006-2.

G006-12

See the response to Comments G006-2 and G006-9. Furthermore, the description of the onshore pipeline improvements required to accommodate the throughput of the proposed Project, and the potential impacts thereof, remain unchanged. See the response to Comment G006-13 for additional detail.

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Continued

G006-10

G006-11

G006-12

⁵ Available at <http://www.ferc.gov/industries/lng/enviro/eis/08-26-05-eis.asp>

⁶ Available at http://dmses.dot.gov/docimages/pdf91/316381_web.pdf

⁷ Available at <http://www.ferc.gov/industries/lng/enviro/eis/05-20-05-eis.asp>

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Project will be greater than 800 MMcfd, the environmental analysis must be revised in order to accurately analyze the environmental impacts for send out capacity in excess of 800 MMcfd and recirculated for public review and comment.

Of greater significance, the confusion and ambiguity regarding the “average” facility output and the potential maximum output results in a significant under-estimation of the project’s potential impacts, in general, and the impacts associated with the construction of improvements and enhancements to the Southern California Gas Company (“SoCalGas”) natural gas pipeline system, in particular.

As for the potential impacts on the SoCalGas system, the DEIR relies on the testimony of David Bisi of SoCalGas in CPUC rulemaking R.04-01-025, filed in 2004. Specifically, the DEIR states that there are only two onshore pipelines and some improvements at Center Road are required for the SoCalGas system to accommodate 800 MMcfd:

Two new onshore pipelines, the Center Road Pipeline in Oxnard and the Line 225 Loop Pipeline in Santa Clarita, would be constructed. These pipelines, along with associated facilities such as a metering station for the Center Road Pipeline, a backup odorant injection system, and block valves on both pipelines, would be installed where existing pipelines are not large enough to accommodate the proposed additional supply. *According to SoCalGas, the two onshore pipelines and expansion of the valve stations are the only major upgrades needed to accommodate an average daily increase of 800 MMcfd (22.7 million m3 per day) (Bisi 2004).* (DEIR, p. 2-24.)

The italicized statement above is untrue, resulting in a fatally flawed DEIR.

The Bisi testimony presents a table, Table 5, listing the system improvements required for new supply at Center Road Station and downstream for the SoCalGas system to accept new supplies of natural gas at Center Road. Specifically, Table 5 presents the required SoCalGas system improvements required to deliver additional increments of natural gas ranging from 40 MMcfd to 1,500 MMcfd as follows on both a displacement basis and an expansion basis:

(Reminder of this page intentionally left blank)

G006-12 Continued

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SoCalGas has indicated that further expansion in the SoCalGas system would not be needed to enable Cabrillo Port to deliver 1,200 to 1,500 MMscfd on a short-term basis during a period of peak demand.

As discussed in Section 2.2.2.3 under Export Capacity, SoCalGas has verified that the new Center Road pipelines would be designed to accommodate 1.5 billion cubic feet per day but would only accept a maximum capacity of 800 MMcfd on a firm delivery basis. Firm delivery is defined as the maximum deliveries that can be accepted by SoCalGas on a daily basis, 365 days a year. In accordance with Rule 30, SoCalGas intends to receive gas deliveries as nearly as practicable on uniform hourly and uniform daily rates of flow. Any additional peak volumes above the 800 MMcfd may be accepted on an interruptible basis as system conditions allow. System conditions that affect interruptible capacity include peak demand in the local area, system outages/system maintenance that restrict gas flow into the area from other sources, weather conditions, and other conditions that might temporarily increase demand or reduce supply of natural gas from other sources. As with all deliveries, any gas that flows into the SoCalGas system in association with interruptible capacity must be redelivered to an end-use customer or storage account on a like basis.

Any additional modifications to the SoCalGas system in Ventura and Los Angeles counties required for additional natural gas throughput resulting from other projects, such as the Clearwater Port Project, are more appropriately addressed in the required environmental documentation for that Project.

See the response to Comment G006-1.

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Table 5: System Improvements & Costs for New Supply at Center Road Station

Facility Improvement	Cost \$MM	Delivered volume (MMCF/D)									
		40	140	200	300	400	500	600	700	800	900
[1]** New pipeline to Center Road Station	72*	○●	○●	○●	○●	○●	○●	○●	○●	○●	○●
[2] Improvements at Center Road Station	3	○●	○●	○●	○●	○●	○●	○●	○●	○●	○●
[3] Loop Line 225, Saugus to Quigley	20 - 22		●	●	●	●	●	●	●	●	●
[4] Loop Line 324	105 - 173										○●
[5] Rebuild existing PLS/crossovers	6										○●
[6] Loop Line 225, Honor to Saugus	9										●
[7] Extend Line 3008	15 - 24										●
[8] New compression at Brea (10,000 HP)	39										●
[9] New compression at Shaver (300 HP)	2										●
[10] Modify Moreno compressor station	5										●

○ Displacement basis

● Expansion basis

* Significant increase due to reclassification of terrain, extra mileage, and anticipated permit conditions.

** Numbering in brackets added.

Table 5 (continued)

Facility Improvement	Cost \$MM	Delivered volume (MMCF/D)					
		1000	1100	1200	1300	1400	1500
[1] New pipeline to Center Road Station	72*	○●	○●	○●	○●	○●	○●
[2] Improvements at Center Road Station	3	○●	○●	○●	○●	○●	○●
[3] Loop Line 225, Saugus to Quigley	20 - 22	●	●	○●	○●	○●	○●
[4] Loop Line 324	105 - 173	○●	○●	○●	○●	○●	○●
[5] Rebuild existing PLS/crossovers	6	○●	○●	○●	○●	○●	○●
[6] Loop Line 225, Honor to Saugus	9	●	●	○●	○●	○●	○●
[7] Extend Line 3008	15 - 24	●	●	○●	○●	○●	○●
[8] New compression at Brea (10,000 HP)	39	●	●	●	●	●	●
[9] New compression at Shaver (300 HP)	2	●	●	●	●	●	●
[10] Modify Moreno compressor station	5	●	●	●	●	●	●
[11] New compression at Wheeler Ridge (1,000 HP)	4				●	●	●

○ Displacement basis

● Expansion basis

* Significant increase due to reclassification of terrain, extra mileage, and anticipated permit conditions.

** Numbering in brackets added.

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Continued

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First, and foremost, Mr. Bisi's Table 5 testimony describes upgrades necessary to accommodate 800 MMcfd on a daily basis, not an annual average or daily average. Mr. Bisi's testimony clearly shows the MMcf/d in the header of Table 5: deliveries on a daily basis.

Significantly, because all volumetric references in Bisi's testimony are to daily volumes, not "daily average" or "annual average" volumes, the SoCalGas system improvements identified are the system improvements required to move daily flows of 800 MMcfd. *There is no averaging in Mr. Bisi's testimony.*

Table 5 of Mr. Bisi's testimony states unambiguously that the following upgrades to the SoCalGas system are required to flow 800 MMcfd on the expansion basis: [1] a new pipeline to Center Road Station, [2] improvements at center Road, and [3] loop Line 225 from Saugus to Quigley.

For flows above 800 MMcfd, additional significant improvements must be made to the SoCalGas system. For example, referring again to Table 5 of the Bisi testimony, to accommodate flow of just 900 MMcfd on a displacement basis the testimony indicates that [1] new pipeline to Center Road Station, [2] improvements at Center Road Station, [4] loop L324 and [5] rebuild existing PLS/crossovers are required. On an expansion basis at 900 MMcfd, the Bisi testimony indicates that in addition to [1] a new pipeline to Center Road Station, [2] improvements at Center Road, and [3] loop Line 225 from Saugus to Quigley, the SoCalGas system will also require item [4] the "Loop Line 324", item [5] rebuild existing PLS/crossovers, item [6] "Loop Line 225, Honor to Saugus, item [7] Extend Line 3008, item [8] new compression at Brea, item [9] new compression at Shaver, and item [10] modify Moreno Compressor Station.

Table 5 unambiguously states that for flows above a daily flow of 800 MMcfd the looping of Line 324 is required. More particularly, the looping of Line 324 is required on either an expansion or a displacement basis, i.e., under all circumstances, for flows above 800 MMcfd.

Line 324 is the "link" between Center Road to the west and Saugus to the east. This link is missing from the DEIR. Without the Line 324 upgrades, natural gas flows above 800 MMcfd are impossible. There are potentially significant environmental impacts that must be identified and analyzed in the DEIR for Line 324 and flows above 800 MMcfd. As the DEIR describes it, "Line 324 interconnects the Center Road Station with the Saugus Station in the Santa Clarita area." (DEIR, p. 2-42.) The Line 324 Loop would be approximately thirty-four miles of new pipeline, traveling from Center Road in Ventura County to Saugus in Los Angeles County.⁸

⁸ Line 324 is approximately 34 miles in length. However, while it may be preferable to "twin" the Line 324 line by paralleling the existing line for its entire length, a Line 324 "loop" may be longer if existing geological conditions and other siting constraints force the loop to deviate from the existing Line 324 routing.

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Looping Line 324 will require substantial new pipeline additions. In fact, the Line 324 looping alone will require more miles of new pipeline than (1) the offshore pipeline for the BHP project, (2) the landfall to Center Road pipeline, and (3) Line 225 Looping as studied in the DEIR: 30.47 miles of total pipeline length as studied in the DEIR versus approximately thirty-four miles of total pipeline length omitted from study by the DEIR for the looping of Line 324.⁹ The Bisi testimony estimates that this new Line 324 loop would cost between \$105 and \$173 million dollars.

Looping Line 324 is a particularly significant direct impact associated with the BHP project, should it desire to deliver gas in excess of 800 MMcfd per day. Given that the DEIR describes an intention for the FSRU to flow at a daily or annual “average” of 800 MMcfd, it is clear that the project would have to flow 900 MMcfd or more at some times to establish an 800 MMcfd “average.” Accordingly, the BHP project will have to install the Line 324 Loop to meet its projected annual or daily average flows. However, the DEIR is completely silent on the Line 324 Loop and the environmental impacts associated with this new thirty-four mile pipeline.

For flows above 900 MMcfd, the Bisi testimony identifies a series of additional improvements to the SoCalGas system that are required. CEQA demands that the impacts of Line 324 Loop and other SoCalGas system improvements must be analyzed to the same degree of specificity as construction of the new pipeline to Center Road, the Center Road Improvements, and the Line 225 Loop from Saugus to Quigley. The DEIR completely fails to do so.

Inexplicably, although the DEIR states that the projected improvements are drawn from the Bisi testimony, the onshore pipeline system improvements included in the DEIR are different from the pipelines recommended in the Bisi testimony. Table 5 of the Bisi testimony indicates that only the first three improvements are required for daily flows of 800 MMcfd: [1] New pipeline to Center Road Station, [2] Improvements at Center Road Station, and [3] Loop Line 225, Saugus to Quigley on the expansion basis.

In contrast to the Bisi testimony, the DEIR includes an analysis of the following: items [1] New pipeline to Center Road Station, [2] Improvements at Center Road Station, [3] Loop Line 225, Saugus to Quigley and [6] Loop Line 225, Honor to Saugus. Items [3] and [6] taken together are what the DEIR refers to as the “Line 225 Loop Pipeline.”¹⁰

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Continued

⁹ The pipeline studies in the DEIR are described as follows: “The total length of the pipelines from the pipeline ending manifold at the FSRU to the onshore main line valve would be approximately 22.77 miles (36.64 km).” (P. ES-5) “The Line 225 Loop Pipeline would consist of approximately 7.7 miles (12.4 km) of new 30-inch (0.76 m) diameter pipeline, generally paralleling the existing Line 225 Pipeline.” (P. ES-6.)

¹⁰ The Line 225 Loop is described as follows: “The proposed Line 225 Pipeline Loop would be 30 inches (0.76 m) in diameter, designed for an MAOP of 845 psi (594,100 kg/m²), and extend approximately 7.7 miles (12.4 km) between Quigley Valve Station and the Honor Rancho Storage Facility.” (P. 2-50.) See also Figure 2.4-2.

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Item 6, the Loop Line 225, Honor to Saugus, is one of the items the Bisi testimony indicates is required for flows in excess of 800 MMcfd. The DEIR does not explain why the project incorporates only one of the upgrades for volumes in excess of 800 MMcfd and excludes all of the other upgrades that would be required for delivered volumes of 900 MMcfd or more. If, as the DEIR states, it is infeasible to construct the FSRU without the Line 225 Loop from Honor to Saugus (DEIR, p. 3-40), then it is similarly infeasible to construct the FSRU without the Line 324 Loop as well.

According to Table 5 of the Bisi testimony, in order to accommodate 1,200 MMcfd or 1,500 MMcfd on a displacement basis, the BHP project would require the following additional upgrades to the SoCalGas system:

- [1] New pipeline to Center Road Station;
- [2] Improvements at Center Road Station
- [3] Loop Line 225, Saugus to Quigley;
- [4] Loop Line 324;
- [5] Rebuild existing PLS/crossovers;
- [6] Loop Line 225, Honor to Saugus; and
- [7] Extend Line 3008

According to the Bisi testimony, all seven improvements to the SoCalGas system are required for flows of 1,200 MMcfd or 1,500 MMcfd. Again, CEQA demands that the impacts of all improvements to the SoCalGas system, items [1]-[7], must be analyzed to the same degree of specificity as construction of the new pipeline to Center Road. The DEIR completely fails to do so.

The serious misreading of Mr. Bisi's testimony creates numerous inadequacies in the DEIR's environmental analysis. CEQA demands a description of the facilities that will have to be constructed.¹¹ In this case, the DEIR similarly fails to include a full description of all of the

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¹¹ In *Santiago County Water Dist. v. County of Orange*, *supra*, 118 Cal.App.3d 818, the appellate court held that an EIR on a proposed mining operation was inadequate because it failed to include "a description of the facilities that will have to be constructed to deliver water to the mining operation, or facts from which to evaluate the pros and cons of supplying the amount of water that the mine will need." (At p. 829.) The court wrote:

"The construction of additional water delivery facilities is undoubtedly one of the significant environmental effects of the project. As such, a description of the necessary construction had to be included if the EIR was to serve its informational purpose. [Citations.] Because of this omission, some important ramifications of the proposed project remained hidden from view at the time the project was being discussed and approved. This frustrates one of the core goals of CEQA. 'Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal ... and weigh other alternatives in the balance. An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR.' " (118 Cal.App.3d at pp. 829-830, fn. omitted.)

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onshore pipeline facilities that will have to be constructed to accommodate a maximum output of 1,200 or 1,500 MMcfd. The construction of these additional pipeline facilities is undoubtedly one of the significant environmental effects of the project. As such, a description of all necessary construction has to be included in the DEIR. Because of the omission of any principled explanations for accepting some, but not all of the SoCalGas pipeline improvements required by the Bisi testimony, some important impacts of the project are hidden from view.

The DEIR relies on the Bisi testimony to define the scope of the improvements required for the SoCalGas system to accept the BHP project's output. Mr. Bisi testified that Table 5 items [1], [2], [4] and [5], on the displacement basis, and that Table 5 items [1] thru [10], on the expansion basis are necessary to accommodate more than 800 MMcfd. The BHP FSRU project will deliver more than 800 MMcfd. Therefore, FSRU project outputs above 800 MMcfd are infeasible unless all of the improvements identified in the Bisi testimony as required for flows of either 1,200 MMcfd or 1,500 MMcfd are identified in the Project Description, and analyzed in the DEIR.

Accordingly, to cure these significant flaws, CSLC, MARAD, and USCG must revise and recirculate the DEIR to include the additional onshore improvements to the SoCalGas system, as set forth in the Bisi testimony for flows above 800 MMcfd up to the project's maximum output of 1,200 MMcfd, 1,500 MMcfd or some other number.

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Section 4.6.1.3 contains updated information on FSRU operations associated with natural gas delivery rates, which would vary between 800 and 1,500 MMscfd. This revised information clarifies the maximum operation of the submerged combustion vaporizers (SCVs) on an hourly, daily, and annual basis. Section 4.6.4 contains revised analyses of the Project's air quality impacts based on normal and maximum operating scenarios. These revised analyses reflect the maximum operation as discussed in Section 4.6.1.3.

C. The Contradictory Characterization Of The Project's Maximum Output Fatally Impairs The Environmental Analysis Of Air Quality Impacts Of The Project.

1. The Project's Air Quality Analyses Appear to Assume a Maximum Output of 800 MMcfd.

For the purpose of modeling air emissions, the Project appears to assume a send out capacity of 800 MMcfd. However, as with the rest of the project description, it is not clear from the DEIR whether the assumed 800 MMcfd output is an average daily output or is the maximum output. VCAPCD rules, as applied by US EPA, require the applicant to model the maximum output of the facility.

Several of the technical Appendices of the DEIR indicate that the FSRU's air quality analysis was based on 800 MMcfd alone:

- Table FSRU 1: SCV and ICE Fuel Usage, Notes: FSRU throughput 800 mmcf/day, 365 days/yr, 292 mmmcf/yr total (Appendix G2, Air Quality – Operating Emissions, p. 1.)

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- Table FSRU 2: Equipment Controlled Emissions Summary: “Notes: FSRU throughput 800 mmcf/day, 365 days/yr, 292 mmmcf/yr total.” (Appendix G2, Air Quality – Operating Emissions, p. 2.)
- Table FSRU 3: Equipment Uncontrolled Emissions Summary, “Notes: FSRU throughput 800 mmcf/day, 365 days/yr, 292 mmmcf/yr total.” (Appendix G2, Air Quality – Operating Emissions, p. 3.)
- Table FSRU 9: SCV Controlled Emissions Summary: FSRU throughput 800 mmcf/day, 365 days/yr, 292 mmmcf/yr total; SCV sendout rate =200 mmscf/day (guarantee).” (Appendix G2, Air Quality – Operating Emissions, p. 9.)
- Table FSRU 10: SCV Uncontrolled Emissions Summary, (Appendix G2, Air Quality – Operating Emissions, p. 10.)
- FSRU HAP Emissions, FSRU throughput 800 mmcf/day, 365 days/yr, 292 mmmcf/yr total (Appendix G2, Air Quality – Operating Emissions, p. 39.)

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It is undisputed that the project’s emissions would be higher during those times when the maximum sendout would be 1,200 MMcfd or 1,500 MMcfd. The emissions from power generation, the SCV’s, and all other emissions sources will be greater by design during maximum output. Limiting flows to 800 MMcfd as appears in the project’s technical appendices tends to hide the peak emissions associated with peak output.

It is not clear from the DEIR whether the air quality analysis looked at the potential peak emissions during those times when the project would supposedly have a peak output of either 1,200 MMcfd or 1,500 MMcfd. In particular, it is unclear whether the air quality analysis included consideration of the following emissions for the 1,200 MMcfd and the 1,500 MMcfd cases: maximum instantaneous emission; maximum hourly emissions; maximum three hour rolling average emissions; 8 hour rolling average emissions; daily or 24 hour emissions; maximum quarterly emission; and maximum annual emissions.

To cure this significant flaw, CSLC, MARAD, and USCG must revise and recirculate the DEIR to include an air quality analysis reflecting the project’s maximum potential output of either 1,200 MMcfd or 1,500 MMcfd.

2. The Description of the Operation of the Project’s SCVs Is Inconsistent.

The DEIR is inconsistent in its description of the operating conditions for the project’s eight submerged combustion vaporizers. On the one hand, the text in Section 4.6 states, “No more than three 8,250-kW generators or [sic] five submerged combustion vaporizers would be operated simultaneously.” (P. 4.6-14; emphasis added.) On the other hand, the text of

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Appendix G2, “Air Quality Operating Emissions,” states that the controlled emissions are based on “Four SCVs operating at 100% capacity factor for 8,760 hrs/yr, low-NOx burners.” (Appendix G2, Table FSRU 2, P. 2.) The DEIR should provide an explanation as to why up to five SCVs may be operating at any one time (presumably at 80% load), but the Appendix G2 analysis relies on 4 SCVs at 100% load.

Of greater significance, calculating potential emissions based on 100% load may significantly understate the maximum potential to emit. It is a well-settled principle for most combustion sources that lower load levels will result in higher emissions. If BHP proposes to operate five SCVs at 80% load as a base case, experience with other combustion sources suggests that the emissions for five SCVs at 80% load could be greater than the emission for four SCVs at 100% load. Accordingly, the DEIR must be revised in one of the following two ways. First, if SCVs are an exception to the general rule that lower loads result in higher emission, the DEIR should be revised to explain why the SCVs deviate from this general rule. Second, and in the alternative, if SCVs are subject to the general rule that lower loads result in higher emission, then the air quality analysis must be revised to analyze the potential impacts associated with 5 SCVs operating at 80% load.

Further, the DEIR does not explain why BHP would limit operations to five SCVs on stream at any one time, yet install eight SCVs total. Planning for some system redundancy is both prudent and permissible. However, in almost all applications, the engineering logic applied for system redundancy is “N+1” where N is the number of SCVs needed and the “+1” represents one installed spare. In the case of the FSRU, the N+1 numbers are either (a) five SCVs, if the N+1 analysis is based on Appendix G2 assumption of four SCVs operating at 100%, or (b) six SCVs, if the N+1 analysis is based on Section 4.6 statements that up to five SCVs would be operating. Notwithstanding the “N+1” numbers of either five or six SCVs, the DEIR fails to explain why eight SCVs are proposed.

The DEIR should explain the linkage between the number of SCVs in operation and the facility’s maximum potential output. The eight submerged combustion vaporizers would each have a maximum LNG vaporizing capacity of 198 tons (179,600 kg) per hour. (P. 2-24.) For reference, 1 Bcf of vaporized Oman LNG weighs 25,000 tons. At a regasification capacity of 198 tons, each SCV would have a vaporization capacity of 0.190 Bcfd at 100% load:

BHP Vaporizer Capacity - Oman gas	
25,000	tons/Bcf
198	tons/hr/SCV
0.008	Bcf/hr/SCV
0.190	Bcfd/SCV

As discussed above, the DEIR is inconsistent in its statements regarding how many SCVs would be operating at any one time. In some cases, “No more than ... five

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submerged combustion vaporizers would be operated simultaneously.” (P. 4.6-14; emphasis added.) If five SCV are operating at 0.190 Bcfd at 100% load, then the SCVs are capable of producing 950 MMcfd. If five SCV are operating at 0.190 Bcfd at 80% load, then the SCVs are capable of producing 760 MMcfd.

In other cases, the DEIR indicates “Four SCVs operating at 100% capacity factor for 8,760 hrs/yr, low-NOx burners.” (Appendix G2, Table FSRU 2, P. 2; emphasis added.) If four SCV are operating at 0.190 Bcfd at 100% load, then the SCVs are capable of producing 760 MMcfd.

Further, the DEIR expressly rejects the possibility that all eight SCVs would operate simultaneously. However, if all eight SCVs were operating at 100% capacity at 0.190 Bcfd, the total vaporization capacity would be 1,520 MMcfd. This number is closest to the highest maximum output referenced in the DEIR of 1,500 MMcfd. It is important to note that the DEIR fails to analyze the potential impacts associated with the operation of all eight SCVs at once yet it appears that this is precisely what would be required for the project to have a maximum output of 1,500 MMcfd. This lack of analysis is a significant flaw in the DEIR that can only be cured by reanalysis and recirculation for public review and comment.

As discussed in detail in Section I above, it is unclear whether the FSRU’s maximum potential output is 1,200 MMcfd or 1,500 MMcfd. The FSRU’s maximum send out is a direct function of the operations of the SCVs. The DEIR’s contradictory statements regarding the FSRU’s maximum potential output are compounded by the DEIR’s contradictory statements regarding the number of SCVs that will operate at any given time. CEQA demands a clear and stable project description. The DEIR should be revised to explain the precise relationship between the FSRU’s maximum output and the operation of the project’s SCVs.

D. The Contradictory Characterization Of The Project’s Maximum Output Fatally Impairs The Environmental Analysis Of Ballast Water Impacts Of The Project.

As with the air quality analysis, the ballast water analysis performed used an average output of 800 MMcfd, not the peak output of either 1,200 MMcfd or 1,500 MMcfd as a basis for its environmental analysis:

- LNG Volume removed from FSRU because of LNG that is Regasified to NG and sent to shore via pipeline from FSRU @ 800MMscfd rate = ~ 35,000M3 LNG per day (Appendix D5, Ballast Water System Operations and Design Features, P. 5 of 17.)
- LNG Volume removed from FSRU because of LNG that is Regasified to NG and sent to shore via pipeline from FSRU @ 800MMscfd rate = ~ 35,000M3 LNG per day. (Appendix D5, Ballast Water System Operations and Design Features, P. 6 of 17.)

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Continued

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The Project has been modified since issuance of the March 2006 Revised Draft EIR. See Section 1.4.2 for a summary of Project changes. A closed loop tempered water cooling system, which recirculates water, would be used instead of a seawater cooling system, except during annual maintenance (four days for the closed loop tempered water cooling system, and four days for the Moss tanks when the inert gas generator [IGG] would be operating).

Because seawater would only be used as non-contact cooling water during these maintenance activities, the volume of seawater used would be greatly reduced. Seawater would also be used for ballast. Section 2.2.2.4 describes the proposed seawater uptakes and uses for the FSRU. Appendix D5 describes seawater intakes and discharges during Project operations, and Appendix D6 describes the closed loop water system and provides thermal plume modeling analysis of discharges from the backup seawater cooling system.

When either the backup seawater cooling system or the IGG are operating, the temperature of the discharged seawater would be elevated above ambient temperatures no more than 20°F at the point of discharge and would be 1.39°F at 300 m from the point of discharge during the worst case scenario. These thermal discharges would comply with the California Thermal Plan (see Sections 4.7.4 and 4.18.4 and Appendix D6).

Further, as indicated in response to Comment G006-2, sections relevant to this comment, specifically Sections 4.7 and 4.18, have been updated as appropriate to reflect the clarification of throughput figures within Section 1.0.

See the response to Comment G006-1.

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- LNGC cargo discharges to the FSRU are currently planned to occur on average 2.5 times per week, or 130 times per annum. This figure is based on the long term average gas delivery rate of 800MMscfd. (Appendix D5, Ballast Water System Operations and Design Features, P. 7 of 17.)
- Table 3 details the minimum flow velocities for the normal operation case when the FSRU is discharging regasified gas to the shore. A period of one day is selected based on the long term average NG delivery rate of 800MMscfd. (Appendix D5, Ballast Water System Operations and Design Features, P. 15 of 17.)
- Table 3: Based on 800MMscfd (Appendix D5, Ballast Water System Operations and Design Features, P. 16 of 17.)
- “At all times, except during LNG carrier loading into the FSRU, ballast water would be taken onto the FSRU at an average rate of 2,814 gallons per minute to compensate for the volume of natural gas being transported ashore via the subsea pipeline. This is based on a natural gas send out rate of 800 million standard cubic feet per day (MMscfd), which is the average daily amount of natural gas production. Table 1a provides estimated average volumes required per day, week, and year for the FSRU ballast water systems.” (Appendix H1, Cabrillo Port Ichthyoplankton Impact Analysis, p. 3.)

It is not clear from the DEIR whether the ballast water analysis looked at the potential impacts associated with a peak output of either 1,200 MMcfd or 1,500 MMcfd. To cure this significant flaw, CSLC, MARAD, and USCG must revise and recirculate the DEIR to include the additional analysis of ballast water impacts associated with a peak output of either 1,200 MMcfd or 1,500 MMcfd.

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Continued

E. In Light of the Contradictory Characterization of the Project’s Maximum Output, All Section 4 Environmental Disciplines Must Be Reexamined.

Section 4 of the DEIR sets forth an “Environmental Analysis” for the project, encompassing nineteen specific disciplines. As discussed above, some sections of the DEIR appear to be based on 800 MMcfd as a maximum. The SoCalGas system improvements, the air quality analysis, and ballast water studies, as discussed above, all appear to have used an “average” of 800 MMcfd instead of the project’s maximum potential output of either 1,200 MMcfd or 1,500 MMcfd.

For other Section 4.0 disciplines, such as noise, environmental impacts seems to have been considered based on “average” send out of 800 MMcfd and a maximum send out of 1,200 MMcfd, but not 1,500 MMcfd. (P. 4.7-61.) For the purpose of modeling Cooling Water

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See the response to Comment G006-2. No other sections are affected by the cited clarification of potential variability of output as indicated.

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Discharges (Marine Biological Resources, Section 4.7) and Noise (Section 4.14), the DEIR appears to assume that the maximum capacity of the project is 1,200 MMcfd. If the maximum output is actually 1,500 MMcfd, these analyses are incorrect, understating potential impacts, and will need to be revised and recirculated for review and comment. Other Section 4 disciplines do not clearly state whether the potential environmental impacts were measured against an assumption of 800 MMcfd or the peak proposed for the project of either 1,200 MMcfd or 1,500 MMcfd.

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CEQA dictates a clear project description. Given the flaws in the basic project description related to the project's potential maximum output, each of these nineteen Sections should be reexamined to ensure that the potential significant environmental impacts associated with the project were measured against the maximum potential output of the facility (either 1,200 or 1,500 MMcfd, as the case may be), and not against an output of 800 MMcfd.

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II. THE DEIR FAILS TO ANALYZE THE POTENTIAL CUMULATIVE IMPACTS OF THE LONG BEACH PROJECT AND THE CLEARWATER PROJECT ON THE SOCALGAS PIPELINE SYSTEM AS WELL AS THE RESULTING IMPACTS ON THE ENVIRONMENT.

The DEIR is required to discuss the cumulative impacts of the FSRU. (14 CCR 15130(a).) CEQA defined cumulative impacts in pertinent part as follows: "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects." (14 CCR 15355(b).)

G006-18

It is axiomatic that if the DEIR failed to properly characterize and analyze the direct and indirect impacts of the proposed FSRU project, then the cumulative impacts analysis (Section 4.19) constructed on the flawed DEIR analysis is similarly flawed.

A. The DEIR Fails To Consider The Cumulative Impacts of the FSRU and the Long Beach LNG Project.

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The DEIR notes that Sound Energy Solutions has proposed constructing and operating an LNG terminal at the Port of Long Beach. However, the DEIR incorrectly states that the "only potential cumulative impact associated with this facility and the proposed Project would be a regional increase in vessel traffic" (DEIR 4.20-11)

Vessel traffic is not the only potential cumulative impact of these two projects. As noted in the Bisi testimony cited in the DEIR, "If two or more of these new [LNG] receipt points were established, the total improvements costs may be significantly more than the sum of the

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G006-16 Continued

G006-17

See responses to Comments G006-7 through G006-16.

G006-18

The cumulative impacts analysis within Section 4.20 has been conducted to account for those projects that are reasonable and foreseeable, in accordance with NEPA and the State CEQA Guidelines. See 40 CFR 1508.7 and section 15130 of the State CEQA Guidelines, with which the document complies.

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Section 4.20.1.3 contains information on the Port of Long Beach Sound Energy Solutions Onshore LNG Terminal and Section 4.20.1.1 contains information on the Clearwater Port project. Section 4.20.3 analyzes the potential cumulative impacts of these projects in the appropriate resource areas.

The Long Beach Board of Harbor Commissioners voted on January 22, 2007, to end the environmental review of a proposal by SES and issued the following statement: "After deliberation, based upon an opinion from Long Beach City Attorney Robert Shannon, who concluded that the Environmental Impact Report on the proposed LNG project 'is and in all likelihood will remain legally inadequate,' and since an agreement between Sound Energy Solutions and the City does not appear to be forthcoming, the Board of Harbor Commissioners disapproves the project and declines to pursue further negotiations" (Port of Long Beach 2007).

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The cumulative impacts of the construction and installation of pipelines associated with the proposed SES Port of Long Beach onshore LNG terminal were not evaluated because the projects are sufficiently geographically distant that cumulative effects to air quality, agriculture, aesthetics, terrestrial biological resource, cultural resources, energy and minerals, geological resources, hazardous materials, land use, noise and vibration, recreation, socioeconomics, transportation, water quality, and environmental justice would not occur. As discussed in Section 1.0, the average annual throughput would be 800 million cubic feet per day.

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individual receipt point expansion costs.” (Bisi, p. 10) Bisi stated that if receipt points were added at both Center Road and Salt Works, in addition to the upgrades required for the individual projects, SoCalGas would also need to provide additional looping on Line 765; additional looping on Line 225; partial looping on Line 324; and construction of a new pressure limiting station in the Los Angeles basin. (Id.) Each of these improvements will have environmental impacts. These impacts are not addressed in the DEIR.

In addition, the improvements identified in the Bisi testimony assume deliveries of 800 MMcf/d at Center Road and Salt Works. If the actual output of the FSRU is in excess of 800 MMcf/d, then further improvements may be required to accommodate both the FSRU and the Long Beach projects.

B. The DEIR Fails To Consider The Cumulative Impacts of the FSRU and the Crystal LNG Project.

The DEIR also notes that Crystal has proposed constructing and operating an offshore LNG terminal that would connect to the SoCalGas system at Center Road. However, the DEIR fails to mention, much less analyze, the combined impact on the SoCalGas pipeline system of two LNG projects connecting at Center Road. Assuming combined delivered volumes (on an expansion basis) of 800 MMcf/d at Center Road from each of these projects, the combined effect would be to require, at a minimum, all of the improvements identified under the 1,500 MMcf/d case on Table 5 of Bisi’s testimony.

In Section I.B. of our comments above, we argue that if the FSRU has a maximum output of 1,200 or 1,500 MMCFD, the DEIR must analyze the environmental impacts of all of the improvements listed in the Bisi testimony. Moreover, these improvements must also be analyzed in the DEIR because [Public Resources Code section 21083\(b\)](#) requires the cumulative effects of the FSRU and Crystal projects which are “individually limited but cumulatively considerable” to be addressed in the DEIR.

“Only through an accurate view of the project may the public and interested parties and public agencies balance the proposed project’s benefits against its environmental cost, consider appropriate mitigation measures, assess the advantages of terminating the proposal and properly weigh other alternatives”
([City of Santee v. County of San Diego, supra, 214 Cal.App.3d at p. 1454.](#))

Here, the failure to consider all of the “downstream” impacts on the SoCalGas pipeline system resulted in an inaccurate project description and incomplete identification and analysis of

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G006-21

Table 4.20-1 and Section 4.20.1.1 contain publicly available information on the Clearwater Port project, for which an application has been filed under the DWPA, but has not been deemed complete and, as indicated in the discussion of the Clearwater Port Project within Section 3.3.8.1, the environmental analysis for such project has not yet begun. It is this analysis, because of the timing of the processing of the Cabrillo Port and Clearwater Port Projects, that would need to provide the analysis described in the comment, especially if the proposed license for Cabrillo Port is approved. Section 4.20.3 analyzes the cumulative impacts for each resource based on the publicly available information.

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the environmental effects of the development project.¹² That failure to provide a legally-sufficient project description calls into question the direct and indirect project impacts analyzed in Section 4.0 of the DEIR.

Thus, because the DEIR did not "adequately apprise all interested parties of the true scope of the project for intelligent weighing of the environmental consequences of the project," informed decisionmaking was precluded. (*City of Santee v. County of San Diego*, *supra*, 214 Cal.App.3d at pp. 1454-1455.) The FSRU DEIR is inadequate as a matter of law.

III. STORAGE IS NEITHER A BASIC PROJECT OBJECTIVE NOR AN OPERATIONAL REQUIREMENT FOR AN OFFSHORE LNG PROJECT.

The DEIR uses storage, or the lack thereof to reject a wide range of otherwise feasible alternatives. Such rejection is contrary to CEQA.

A. Storage Is Not a Basic Project Objective and Thus Not a Valid Basis For Rejecting An Existing Platform-Based Terminal Alternative.

The FSRU would store LNG in three Moss tanks located along the length of the facility. The total storage capacity would be approximately 72 million gallons (273,000 m³). (P. 2-22.) The DEIR rejects further consideration of an offshore oil platform as an alternative to the project because a platform-based alternative would not have storage capacity. (P. 3-24.)

While it is true that an offshore oil platform may not have LNG storage on the platform, such storage is simply neither a basic project objective nor necessary to provide a consistent supply of natural gas that meets all SoCalGas operational standards. As discussed herein, BHP has defined three basic project objectives. (P. 1-13.) "Storage" is not one of those basic project objectives. Further, as discussed herein, meeting the basic project objective of delivering "an annual average of 800 MMcfd (22.7 million m³) of natural gas into the Southern California area via the existing SoCalGas natural gas transmission system" does not require Moss tank storage facilities.

¹² (*Santiago County Water Dist. v. County of Orange*, *supra*, 118 Cal.App.3d at p. 829.) As stated in *Citizens Assn. for Sensible Development of Bishop Area v. County of Inyo* (1985) 172 Cal.App.3d 151, 166 [217 Cal.Rptr. 893], "[t]he danger of filing separate environmental documents for the same project is that consideration of the cumulative impact on the environment of the two halves of the project may not occur. This danger was here realized."

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G006-22

Section 1.2 states, "The Project would include storage capacity for LNG such that it would continuously supply natural gas to California." Further, as stated in the revised Section 3.3.8.1, since the regasification process generally is slower than the carrier-unloading process, the availability of storage at the FSRU would also allow the regasification process to proceed independently of unloading and thus would reliably supply SoCalGas in the event of unforeseen interruptions of supply such as a delay in the arrival of an LNG carrier.

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B. Storage Is Not Necessary to Meet the Operation Requirements of SoCalGas.

Offshore storage is not necessary to meet the operational standards of SoCalGas. At facilities such as the FSRU, LNG storage is added as a project feature in order to minimize unloading time required for the tankers. LNG tankers typically unload at a peak rate of 12,000 to 14,000 cubic meters per hour, or approximately 6 plus Bcf/day. This peak ship unloading rate of up to 6 Bcf/day is a much higher rate than can be received by the SoCalGas system.

For purposes of these comments, “buffer storage” is LNG storage, dedicated and required to unload the LNG tanker at a high rate, which is typically much higher than the send out capacity of the terminal. Thus, storage at the FSRU is required to allow for expedited offloading of ships, completely unrelated to the facility’s “send out of gas” to SoCalGas system. Put another way, instead of offloading ships at up to 6 Bcf/day into Moss tanks, the FSRU could, instead, offload ships at a slower rate directly into the SoCalGas system, effectively using the LNG vessels themselves as storage.

The basic decision for constructing LNG storage is an economic one: the cost of constructing storage tanks versus the costs of having LNG tankers at the FSRU for the additional days for the tankers to unload at a rate the SoCalGas system can accept. The DEIR should explicitly address whether there are additional reasons for the FSRU to want to include storage, particularly in light of the fact that it is the presence of LNG storage tanks which defines the greatest consequence in the event of failure.. These concerns are not issues for Crystal’s Clearwater Port. Moreover, Crystal’s analysis demonstrates that for Clearwater Port, it is more cost effective to not construct buffer storage. Indeed, the construction of LNG storage on the FSRU is one reason the BHP project will not come on line for years. In marked contrast, it should be noted that the Clearwater Port approach of utilizing tankers in lieu of constructing buffer storage is currently operating effectively at Gulf Gateway Project in the Gulf of Mexico.

C. The Storage on the FSRU is only slightly greater than the Storage capacity of the Largest LNG Tankers.

The storage capacity of each LNG tank (90,800 cubic meters) is less than the storage capacity of a typical LNG tanker (138,000 to 210,000 cubic meters). (P. 2-21.) As such, there will need to be storage capacity available in two of the FSRU’s three Moss tanks before an LNG tanker can approach the FSRU and completely unload its cargo. The required buffer storage capacity to accept a complete tanker cargo must be emptied out prior to the next tanker berthing and unloading. Thus, the available storage capacity does not serve as “storage” in the conventional sense, i.e., it is not available for system balancing because it is constrained by its dedicated purpose to serve as buffer capacity.

Instead, storage at the FSRU is driven by economic consideration such as shipping schedules and perhaps the desire to avoid using land-based storage in the SoCalGas system, not

G006-23

Storage may not be an operational standard of SoCalGas; however, it is a Project component to ensure a continuous and reliable natural gas supply of to California. In addition, the docking and regasification methodologies of the proposed Clearwater Port and the Gulf Gateway Project, which is not designed to provide a continuous natural gas supply, are so dissimilar as to prevent either operational or environmental comparisons.

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G006-24

Based on the information in Section 2.2.2.3, the total LNG storage capacity on the FSRU would be approximately 72 million gallons (273,000 m³).

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by send out to the SoCalGas system. The DEIR notes that typical ship capacities will range from 138,000 to 210,000 cubic meters (gross). (P. 2-21.) If the maximum delivered cargo is 210,000 cubic meters, the effective storage is only 62,400 cubic meters, less than half a tanker load. The FSRU has 3 tanks, each with a storage capacity of 90,800 cubic meters for a total of 272,400 cubic meters of LNG storage on board the FSRU. Assuming the maximum tanker capacity of 210,000 cubic meters, the “effective storage” of the FSRU is only 62,400 cubic meters: $272,400 \text{ m}^3 \text{ total FSRU capacity} - 210,000 \text{ m}^3 \text{ per tanker} = 62,400 \text{ m}^3 \text{ effective storage on the FSRU}$ above what is stored on a tanker.¹³ It should also be noted that if for some reason, the FSRU storage could not be emptied to create sufficient storage space in the Moss tanks, a tanker would either be prevented from unloading cargo or required to unload at a rate equal to the send out capacity that can be received by SoCalGas, in which event the operation would be identical to Clearwater Port.

Thus, from a SoCalGas system send out perspective, the FSRU project essentially operates the same as Clearwater Port. The FSRU send out is drawn from the three Moss tanks while Clearwater Port’s send out is drawn from a single LNG vessel. Accordingly, from the perspective of “stability” of natural gas send out into the SoCalGas market, the DEIR should note that whether the supply to be sent out is drawn from a Moss tank or from the LNG ships acting as storage is completely immaterial.

D. There is Sufficient Land-Based Storage in the SoCalGas System to Accommodate Regasified LNG and Maintain Operational Stability.

There is sufficient storage available in the SoCalGas system and in California gas storage fields to maintain operational stability of the SoCalGas system at Center Road. In testimony filed with the California Public Utilities Commission in an ongoing Rulemaking proceeding (R.04-01-025, “Order Instituting Rulemaking to Establish Policies and Rules to Ensure Reliable, Long-Term Supplies of Natural Gas to California”) SoCalGas provided the following testimony confirming the availability of storage on the SoCalGas system:

SoCalGas operates four storage fields that interconnect with its transmission system. These storage fields – Aliso Canyon, Honor Rancho, La Goleta, and Playa del Rey – are located near the primary load centers of the SoCalGas system. Together they have a combined inventory capacity of 122.1 billion cubic feet (Bcf), a combined firm injection capacity of 850 MMcf/d, and a combined firm withdrawal capacity of 3,175 MMcf/d. (Prepared testimony of David M. Bisi, CPUC R. 04-01025.)

G006-24
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G006-25

Thank you for the information. See the response to Comment G006-22.

G006-25

¹³ Note that these numbers over-state the true send out capacities, since a certain volume of LNG must remain in the Moss tanks to keep them cold for operations purposes.

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The SoCalGas storage system has a combined inventory capacity of 122.1 billion standard cubic feet (Bcf). The 62,400 cubic meters effective storage capacity of the FSRU project will increase this by only 1.37 billion standard cubic feet or less than 1.1% (1.37/122.1). Further this additional storage would not be accessible to the SoCalGas system if the FSRU were sending out at full capacity to meet typical operational obligations. For much of the time, this alleged storage is trapped behind facilities which are intended to be used for normal send out operations. Thus, the DEIR should note that the FSRU storage capacity will not be significant with regards to providing additional storage on the SoCalGas system.

The DEIR falsely states regarding the Clearwater Port, "Its intended purpose would be to meet only spot-market natural gas demand and it could not provide a consistent supply of natural gas." As, the discussion above shows, the Clearwater Port will be designed and operated to provide a supply of gas that is just as consistent as supplies from the FSRU. In addition, if onshore storage is desired by the independent parties who use the services of Clearwater Port as a tolling facility, these parties will have the option to either schedule deliveries for immediate consumption or for delivery to onshore storage facilities. In this respect, the Crystal facility will meet all SoCalGas operational standards. It is not necessary for any LNG facility to guarantee daily deliveries. Because constant deliveries are not a necessary operational characteristic, a project's ability to do so is not an advantage and inability to do so is not a disadvantage.

IV. THE DEIR IMPROPERLY REJECTS FOR FULL CONSIDERATION A REASONABLE RANGE OF FEASIBLE ALTERNATIVES TO THE PROJECT AND THE PROJECT SITE (section 3, *passim*).

The DEIR must consider a reasonable range of feasible alternatives to the project and the project site:

Alternatives to the Proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. (14 CCR §15126.6(a).)

As discussed below, the DEIR fails to give full consideration to this reasonable range of alternatives.

The purpose of the CEQA alternatives analysis is identifying alternatives that mitigate or avoid potentially significant effects of the project:

G006-25
Continued

G006-26

G006-25 Continued

G006-26

Both NEPA and the CEQA require the consideration of alternatives to a proposed project. A lead agency's lack of jurisdiction over a potential alternative is one factor that it may consider in determining if a potential alternative is feasible, reasonable, and merits detailed study in an EIS/EIR. Whether a potential alternative is purely hypothetical or speculative, or whether the potential alternative can be accomplished in a successful manner in a reasonable period of time are additional factors the lead agency may consider in assessing the feasibility and reasonability of the potential alternative.

From a NEPA perspective, while a Federal agency must analyze "a range of reasonable alternatives" (as opposed to any and all possible alternatives), and may be required to analyze an alternative that is outside the capability of an applicant and that is outside the jurisdiction of the agency, the threshold question in determining whether to analyze any alternative is whether that alternative would be a "reasonable" alternative. Reasonable alternatives include those that are practical and feasible from the technical and economic standpoint and using common sense (CEQ 40 Questions; #2a).

To provide for an effective "hard look" at the alternatives the agency must limit the range to those alternatives that will best serve the environmental review process, and not needlessly examine and discuss in depth remote or speculative alternatives that that discussion does not facilitate a better decision making process. As stated in 40 CFR 1502.14(a), the EIS should "rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated."

Section 15126.6(a) of the State CEQA Guidelines states, in part, "[t]he Lead Agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives." The California Supreme Court in the Citizens of Goleta Valley case recognized that while an agency's jurisdiction was only one factor to consider, "[t]he law does not require in-depth review of alternatives that cannot be realistically considered and successfully accomplished." In addition, the discussion in section 15364 in the State CEQA Guidelines states that "[t]he lack of legal powers of an agency to use in imposing an alternative or mitigation measure may be as great a

limitation as any economic, environmental, social, or technological factor."

Chapter 3 discusses energy conservation, efficiency, and renewable sources of energy, and explains why these potential alternatives were not studied in detail in the EIS/EIR. The range of alternatives studied in detail is reasonable and conforms to NEPA and the CEQA requirements.

The EIS/EIR initially evaluated 18 locations for the FSRU as potential locations for the deepwater port. It built on previous California Coastal Commission studies that evaluated nearly 100 locations. Sections 3.3.7 and 3.3.9 discuss alternate locations and technologies that were considered.

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Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. (14 CCR §15126.6(b).)

CEQA recognizes that alternatives to a proposed project may not be a perfect match to the applicant's stated project objectives: "The range of potential alternatives to the proposed project shall include those that could feasibly accomplish *most* of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects." (14 CCR §15126.6(c); emphasis added.) Thus, the reasonable range of alternatives does include, among other things, alternatives that may "impede" to some degree the project objectives and may be more costly than the project as proposed by the applicant.

CEQA also clearly sets forth the reasons that may be used to eliminate alternatives. Chief among these is the inability to meet the basic project objectives:

Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts. (14 CCR 15126.6(c).)

As discussed in detail below, the DEIR fails to use these basic CEQA requirements as a basis for eliminating alternatives.

A. The DEIR Does Not Properly Analyze the Possible Use of an Existing Offshore Platform as an Alternative.

The DEIR rejects the existing platform as an alternative because "it would not accomplish most of the purposes and objectives of the proposed project and would not provide storage capacity, and because sufficient information is not available to analyze it to the same level of detail as the proposed Project." (P. 3-24.) Each of these reasons are incorrect.

It is incorrect to state that an existing platform would not meet "most" of the objectives and purposes of the project. In fact, an LNG project utilizing an existing offshore platform could meet all of the "basic project objectives" as defined by BHP.

The DEIR summarizes the objectives of the project as follows:

G006-26 Continued

G006-26
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G006-27

The existing platform was eliminated as an alternative to the proposed Project for the reasons stated in Section 3.3.8.1.

As stated in Section 1.2, since the proposed FSRU would store gas offshore, it could also continuously and reliably supply natural gas to shore even during times when bad weather or other concerns would otherwise prevent an LNG carrier from mooring alongside and unloading at the DWP. Since the regasification process generally is slower than the carrier-unloading process, the availability of storage at the FSRU would also allow the regasification process to proceed independently of unloading and would reduce the time the LNG delivery vessels must be moored.

Although an application for the Clearwater Port Project has been submitted to CSLC and USCG, the information is not publicly available. The information that is publicly available is insufficient to conduct a comprehensive alternatives analysis, and the environmental analysis for the proposed Clearwater Port Project has not yet begun.

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BHPB was asked to define its Project objectives to assist the lead agencies' development and evaluation of Project alternatives. BHPB's objectives for the Cabrillo Port LNG Deepwater Port can be summarized from its Environmental Assessment (Entrix 2003) as follows:

- Address California's growing demand for clean-burning natural gas for electric power generation, industrial, residential, and commercial uses, thus furthering the national goal of energy sufficiency;
- Provide California consumers access to sources of natural gas from the Pacific Rim and provide greater flexibility and reliability in gas providers; and
- Deliver an annual average of 800 MMcfd (22.7 million m3) of natural gas into the Southern California area via the existing SoCalGas natural gas transmission system. (P. 1-13.)

An existing platform alternative could meet all three of these basic project objectives: (1) it could meet growing demand for LNG; (2) it could provide access to natural gas from the Pacific Rim and other sources; and (3) it could deliver an annual average of 800 MMcfd, especially where the existing platform configuration made use of a dual berthing system.

After clearly defining the three basic project objectives above in the Introduction (Section 1), Project Description (Section 2), and Executive Summary, the DEIR shifts its arguments in the Alternatives Section. In that Alternatives Section, the DEIR states that "one purpose of the Cabrillo Port Deepwater Port is to provide additional storage capacity of natural gas." (P. 3-24.) But the next sentence transforms "one purpose" into "the purpose" of the project:

Therefore, the type of LNG facility associated with an offshore oil platform would not meet the purpose of the proposed Project. The potential existing platform-based terminal alternative was eliminated as an alternative to the proposed Project because it would not accomplish most of the objectives and purposes of the proposed Project and does not provide storage capacity, and because sufficient information is not available to analyze it to the same level of detail as the proposed Project. (*Id.*)

However, the three basic project objectives set forth at page 1-13 do not include storage. Storage is mentioned as a benefit to the project during periods of inclement weather, but is not described as a primary objective. The DEIR overreaches when it characterizes storage as "the" purpose of the project. It further overreaches when it eliminates the existing platform alternative on the

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basis that it does not meet “most” of the basic project objectives when, as noted above, the existing platform meets all three basic project objectives as defined by the applicant.

In addition, as discussed in Section III, storage is not an inherent advantage for an LNG terminal. Since storage is neither a basic project objective nor an inherent advantage to an offshore LNG terminal, CEQA dictates that an existing offshore platform cannot be dismissed as an alternative on those bases.

Further, it is contrary to CEQA alternative analysis principles to reject the fixed platform as an alternative simply because it could be operated simultaneously with the FSRU. The DEIR states, “Since [Clearwater Port] could be licensed and could operate simultaneously with Cabrillo Port, it is appropriate to evaluate its potential effects within the context of cumulative impacts (see Section 4.20, ‘Cumulative Impacts Analysis’).” (P. 3-25.) While it is a correct application of CEQA principles to require an analysis of Clearwater Port in the cumulative impacts analysis, CEQA does not allow for the dismissal of projects similar to Clearwater Port, existing offshore platforms, merely because a competing project has been proposed in this configuration. Indeed, the fact that Clearwater Port could be operated simultaneously with the BHP FSRU underscores the feasibility of the offshore platform configuration as an alternative to the FSRU.

CEQA places a premium on alternatives that avoid or substantially lessen any significant environmental impacts:

The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would *avoid or substantially lessen* any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain *most* of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making. (14 CCR 15126.6(f).)

Reusing an existing offshore platform could minimize, and in some cases, completely avoid the new impacts associated with construction of the FSRU. As such, CEQA requires consideration of alternatives such as the reuse of an existing offshore platform that avoids or minimizes impacts associated with new facilities.

G006-27
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B. The DEIR Does Not Properly Analyze the Possible Use of a Floating Regasification Unit (“FRU”) as an Alternative.

As discussed in Section III above, storage is not one of Cabrillo Port’s basic project objectives, and there is no inherent advantage in storage of LNG offshore. Accordingly, BHP must consider as an alternative a project configuration that avoids the potentially significant impacts associated with storage of LNG.

A Floating Regasification Unit, or “FRU” would be, in essence, the BHP project as proposed, minus Moss storage tanks and ancillary facilities required for storage. A FRU could feasibly achieve all of the basic project objectives as defined by BHP. Specifically, an FRU project alternative could:

- “Address California’s growing demand for clean-burning natural gas for electric power generation, industrial, residential, and commercial uses, thus furthering the national goal of energy sufficiency” by providing a new supply of natural gas;
- “Provide California consumers access to sources of natural gas from the Pacific Rim and provide greater flexibility and reliability in gas providers,” again by providing a new and diversified supply of natural gas; and
- “Deliver an annual average of 800 MMcfd (22.7 million m3) of natural gas into the Southern California area via the existing SoCalGas natural gas transmission system”, particularly if an FRU was equipped with dual berths to allow for an uninterrupted regasification of LNG to natural gas by effectively using the LNG carriers as “storage” necessary to provide the stated project objective of an average daily send out of 800 MMcfd. (P. 1-13.)

In addition to satisfying all three of the project objectives as defined by the applicant, an FRU alternative would completely avoid the potentially significant environmental and public safety impacts associated with the construction and operation of the large Moss tanks proposed by the applicant. Specifically, the FRU alternative could completely avoid potentially significant impacts associated with the construction, operation and maintenance impacts of the Moss tanks:

- Public Safety: The FRU alternative avoids completely the construction, operation and maintenance impacts on public safety associated with the Moss tanks.
- Marine Traffic: The FRU alternative avoids completely the construction, operation and maintenance marine traffic impacts associated with the Moss tanks.
- Aesthetics: The FRU alternative avoids completely the construction, operation and maintenance visual and aesthetic impacts associated with the construction of the Moss tanks.

G006-28

Section 3.3.8.3 has been revised and discusses single- and multiple-point mooring systems as potential alternatives to the FSRU. These alternatives are equivalent to floating regasification units. The rationale for their elimination from further evaluation in this document is included in the section.

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G006-28 Continued

- Air Quality: The FRU alternative avoids completely the construction, operation and maintenance air quality impacts associated with the Moss tanks.
- Biological Resources – Marine: The FRU alternative avoids completely the construction, operation and maintenance impacts on marine biological resources associated with the Moss tanks.
- Hazardous Materials: The FRU alternative avoids completely the construction, operation and maintenance hazardous materials impacts associated with the Moss tanks.
- Noise and Vibration: The FRU alternative avoids completely the construction, operation and maintenance noise and vibration impacts associated with the Moss tanks.
- Recreation: The FRU alternative avoids completely the construction, operation and maintenance recreational impacts associated with the Moss tanks.
- Transportation: The FRU alternative avoids completely the construction, operation and maintenance transportation impacts associated with the Moss tanks.
- Water Quality and Sediments: The FRU alternative avoids completely the construction, operation and maintenance water quality and sediments impacts associated with the Moss tanks.
- Cumulative Impacts: The FRU alternative avoids completely the construction, operation and maintenance potential cumulative impacts associated with the Moss tanks.

An FRU alternative could completely avoid these potentially significant effects and satisfy all three of the project proponent's basic objectives as set forth at page 1-13 of the DEIR. This is more than CEQA requires, since CEQA dictates only that alternatives satisfy "most" of the basic project objectives. Further, CEQA requires consideration of alternatives that minimize or completely avoid the potentially significant impacts associated with the proposed project. As discussed above, the FRU alternative completely avoids the environmental impacts associated with the construction, operation, and maintenance of the proposed offshore Moss storage tanks.

The DEIR must be revised and recirculated to analyze the FRU alternative.

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G006-29

At this time, insufficient information is available to determine whether the concept of an FRU as described would have lesser impacts compared to the proposed Project. Therefore, any conclusions in this regard would be speculative at this time.

G006-30

See the response to Comment G006-1.

G006-29

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C. The DEIR Improperly Rejects Full Consideration of Land-Based Alternative Projects, Section 3, *Passim*.

The DEIR summarily discusses the possibility of a land-based LNG terminal as an alternative to the project, then rejects these alternatives without reference to their ability to satisfy the basic objectives of the project. This flaw must be corrected.

A land-based LNG terminal may be able to satisfy all of the basic project objectives as defined by BHP. Specifically, the DEIR should discuss whether a land-based LNG terminal could (1) address California's growing demand for clean-burning natural gas for electric power generation, industrial, residential, and commercial uses, thus furthering the national goal of energy sufficiency; (2) Provide California consumers access to sources of natural gas from the Pacific Rim and provide greater flexibility and reliability in gas providers; and (3) Deliver an annual average of 800 MMcfd (22.7 million m3) of natural gas into the Southern California area via the existing SoCalGas natural gas transmission system. (P. 1-13.)

It is true that alternatives need not be considered in the same level of detail as the project itself. However, in this case, the DEIR does not examine whether each of the land-based alternatives identified could meet most, if not all of the basic project objectives, whether the alternatives are feasible, and whether they can avoid potentially significant effects. The DEIR should be revised to explain the basis for eliminating all land-based objectives, given the project's defined objectives, or to include an analysis of land-based alternatives that satisfy the basic project objectives.

D. The DEIR's Purported Reasons for Dismissing Fixed Offshore LNG Terminal Alternatives Are Fallacious, PP. 3-24 to 3-25.

Section 3.3.8.1 of the DEIR attempts to explain why the "Fixed Offshore Liquefied Natural Gas Terminal Alternatives," in general, and an "Existing Platform-Based Alternative," in particular, were excluded from full consideration as alternatives to the proposed project. This section states that it includes "[d]escriptions of these [platform-based] alternatives and the *reasons for their elimination* from further consideration." (P. 3-24; emphasis added.) However, these reasons for elimination are inconsistent with the requirements of CEQA to consider a reasonable range of feasible alternatives to the project and the project site that satisfy most of the basic project objectives.

In Section 3.3.8.1, statements offered as "reasons" for elimination of this alternative project configuration are in many cases simply statements of facts, wholly disconnected from any analysis as to whether the alternative may satisfy the basic project objectives. As such, the alternatives analysis must be revised to consider whether the Fixed Offshore LNG terminal

G006-31

Sections 3.3.7.2 and 3.3.7.3 discuss potential locations for an onshore LNG facility and provide the rationale why these locations were eliminated from further consideration. However, see Table ES-0 for a comparison of the Class I impacts identified for the Cabrillo Port and the onshore LNG facility proposed in the Port of Long Beach by Sound Energy Solutions (SES).

G006-31

The Long Beach Board of Harbor Commissioners voted on January 22, 2007, to end the environmental review of a proposal by SES and issued the following statement: "After deliberation, based upon an opinion from Long Beach City Attorney Robert Shannon, who concluded that the Environmental Impact Report on the proposed LNG project 'is and in all likelihood will remain legally inadequate,' and since an agreement between Sound Energy Solutions and the City does not appear to be forthcoming, the Board of Harbor Commissioners disapproves the project and declines to pursue further negotiations" (Port of Long Beach 2007).

G006-32

Both NEPA and the CEQA require the consideration of alternatives to a proposed project. A lead agency's lack of jurisdiction over a potential alternative is one factor that it may consider in determining if a potential alternative is feasible, reasonable, and merits detailed study in an EIS/EIR. Whether a potential alternative is purely hypothetical or speculative, or whether the potential alternative can be accomplished in a successful manner in a reasonable period of time are additional factors the lead agency may consider in assessing the feasibility and reasonability of the potential alternative.

G006-32

From a NEPA perspective, while a Federal agency must analyze "a range of reasonable alternatives" (as opposed to any and all possible alternatives), and may be required to analyze an alternative that is outside the capability of an applicant and that is outside the jurisdiction of the agency, the threshold question in determining whether to analyze any alternative is whether that alternative would be a "reasonable" alternative. Reasonable alternatives include those that are practical and feasible from the technical and economic standpoint and using common sense (CEQ 40 Questions; #2a).

To provide for an effective "hard look" at the alternatives the agency must limit the range to those alternatives that will best serve the environmental review process, and not needlessly examine and discuss in depth remote or speculative alternatives that that discussion does not facilitate a better decision making process. As

stated in 40 CFR 1502.14(a), the EIS should "rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated."

Section 15126.6(a) of the State CEQA Guidelines states, in part, "[t]he Lead Agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives." The California Supreme Court in the Citizens of Goleta Valley case recognized that while an agency's jurisdiction was only one factor to consider, "[t]he law does not require in-depth review of alternatives that cannot be realistically considered and successfully accomplished." In addition, the discussion in section 15364 in the State CEQA Guidelines states that "[t]he lack of legal powers of an agency to use in imposing an alternative or mitigation measure may be as great a limitation as any economic, environmental, social, or technological factor."

Chapter 3 discusses energy conservation, efficiency, and renewable sources of energy, and explains why these potential alternatives were not studied in detail in the EIS/EIR. The range of alternatives studied in detail is reasonable and conforms to NEPA and the CEQA requirements.

Also, see the revised discussion within Section 3.3.8.1.

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alternatives can satisfy the project's basic objectives while avoiding or minimizing potentially significant impacts on the environment.

1. Review of Existing Platforms

The DEIR notes that "there are 27 oil and gas production platforms operating in Federal or State waters in the Santa Barbara Channel, Santa Maria Basin, and offshore of Los Angeles/Long Beach." (*Id.*) The DEIR does not, however, provide any detail on the 27 platforms. The DEIR should be revised to identify the 27 platforms and to analyze whether any of those platforms are feasible alternatives to the proposed BHP project. The reasons for eliminating the platforms should be identified in the revised DEIR. (14 CCR 15126.6.)

2. Permitted Uses

The DEIR states, "Offshore oil platforms can be used only for the intended use for which they were permitted." (P. 3-24.) While it is true that a facility can only be used for the use for which it is permitted, the statement ignores the fact that offshore platforms can be modified to new uses if they are properly permitted for those new uses. The logic of this statement is circular: "the only uses permitted are permitted uses." This statement should be deleted from the DEIR.

3. MMS Approval

The DEIR states, "Altering or converting the function of an offshore oil platform for either exclusive use as an offshore LNG terminal or dual use as an offshore LNG terminal and oil and gas production facility requires a new Development and Production Plan for that platform, approved by the U.S. Department of the Interior, Minerals Management Service." (*Id.*) This statement is simply a statement of fact; it is not a reason for "elimination from further consideration." Further, the requirement to seek MMS approval is not an obstacle to a platform-based alternative. Instead, MMS approval is just one of several approvals required for such a use. Accordingly, this statement regarding MMS approval should be deleted from the DEIR.

4. Cost Considerations

The DEIR states, "Converting an operating oil or gas platform to a different type of facility than originally permitted can be costly and time consuming." (*Id.*) Constructing an FSRU is also costly and time consuming. The purpose of analyzing alternatives is to weigh the relative costs and impacts. The mere fact that an alternative is costly is not a reason for elimination of the alternative. In fact, CEQA requires consideration of alternatives "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." (14 CCR §15126.6(b).) This subjective statement should be deleted.

G006-33

As indicated by the quoted statement, such platforms are currently "operating" as oil and gas production platforms. The suggested analysis is perhaps more appropriate for the documentation to be prepared for the Clearwater Port Project.

G006-34

The sentence is a statement of fact and serves to set the context of the remainder of the paragraph. As a result, it was not deleted.

G006-33

G006-35

The statement cited in the comment is a fact. This statement, in conjunction with the following statements in the paragraph, provides the permitting context for undertaking such a proposal. Therefore, the statement was not deleted from the document.

G006-34

This statement is not intended to be used to explain why this alternative was eliminated from further consideration.

G006-36

The statement has been deleted.

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5. Conversion of an Existing Platform and the FSRU

In referring to the conversion of an existing offshore platform, the DEIR states, that, “[t]his process has never been successfully undertaken.” Again, this statement is not a reason for elimination of an alternative. The FSRU proposed by BHP “has never been successfully undertaken” anywhere in the world, and has certainly never been undertaken in U.S. waters. Further, the DEIR itself recognizes that the BHP “FSRU design represents a new combination of methods for the transfer and storage of LNG.” (P. 2-5.) Thus, like the criticism of the conversion of an existing offshore platform, the BHP FSRU is itself a process that “has never been successfully undertaken.” The DEIR’s Alternatives section must apply the same criteria to both the proposed BHP project and alternatives to the project and the project location. Accordingly, the statement that “[t]his process has never been successfully undertaken” should be deleted from the DEIR.

6. Platform Age Versus Certified As New

The DEIR states, “Currently, most offshore oil platforms are more than 20 years old.” (P. 3-24.) Again, this is not a reason for elimination of an alternative. Offshore platforms that would be converted to a new use would either be relatively new or, significantly, re-certified as new, regardless of the original age of the platform. The DEIR statement is only relevant if one assumes that an LNG proponent would attempt to reuse an offshore platform with no re-certification of the platform as new. Accordingly, this statement should be deleted from the DEIR as a reason for elimination of this alternative.

7. Berthing Facilities Adjacent to, But Offset From, an Existing Platform

The DEIR states, “These platforms were not built to berth LNG carriers or support ancillary equipment.” (*Id.*) This statement is true for platforms in their original, unimproved status; however, as proposed by Clearwater Port, the LNG carrier “berths” can be offset from the platform, thus the LNG carrier does not use the offshore platform as a berth. Instead, the LNG terminal would use the Satellite Service Platform (“SSP”) Floating docking system or some similar system installed adjacent to the platform to safely moor LNG vessels. LNG will be transferred from the vessel to the platform using cryogenic hose or an unloading arm system. The DEIR should be revised to delete the statement that offshore platforms are not built to berth LNG carriers because carriers would not need to be berthed next to the platform if such facilities are offset some distance from the platform.

8. Structural Analysis

The DEIR states, “A comprehensive structural analysis would be needed in order to determine if a platform were sufficiently structurally sound to extend its lifespan and to support a deepwater port for LNG.” (*Id.*) While this is true, the need for further analysis is not a

G006-37

The sentence is a statement of fact and serves to set context. As a result, it was not deleted. This statement is not intended to be used to explain why this alternative was eliminated from further consideration.

G006-37

G006-38

See the response to Comment G006-37.

G006-39

Thank you for the information about the satellite service platform proposed for use at the Clearwater Port. The description of the conversion of an existing platform-based terminal alternative is not intended to represent Clearwater Port. The Clearwater Port project application has not been deemed complete, and there is no publicly available information about its proposed configuration.

The statement regarding the berthing facility is true at this time; therefore, it has not been deleted. This statement is not intended to be used to explain why this alternative was eliminated from further consideration.

G006-38

G006-40

See the response to Comment G006-37.

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G006-40 Continued

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reason for rejecting an Alternative. Comprehensive structural analyses are routinely performed on offshore structures. The statement should be deleted from the DEIR.

9. Visual Resources Aesthetics: Recognition of the Proper CEQA Baseline

The DEIR states that “The addition of berthing capability to the platform would also create a larger object in the view shed and would extend the life of an existing, perceived adverse visual effect.” (*Id.*) Unlike the BHP FSRU, which would be a completely new feature in the visual setting, the offshore platform to be used would be an existing platform. As such, that existing platform is already in the existing environmental baseline.

CEQA demands that a project's potential impacts be measured from the existing environmental baseline. The fact that the visual impacts of an existing structure may be less significant than the proposed project is a reason why it should be considered as an alternative, rather than rejected from consideration.

An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to an understanding of the significant effects of the proposed project and its alternatives. (14 CCR 15125(a).)

Thus, CEQA measures impacts against a baseline of the *status quo* (i.e., the current environment) including the existence of Platform Grace. This makes sense because CEQA seeks to inform the decision-maker of the environmental consequences of the change to the *status quo* represented by the proposed project.

In marked contrast to the well-settled CEQA requirement that environmental review be measured from the existing environmental baseline is the DEIR's reference to an extension of a “perceived adverse visual effect.” This pejorative reference to the existing environmental setting is contrary to the dictates of CEQA and NEPA that the proposed project and its alternatives be measured against the existing environmental baseline. As such, to be consistent with both CEQA and NEPA, the statement that an offshore alternative “would extend the life of an existing, perceived adverse visual effect” must be deleted.

Further, assuming regasification of the LNG to natural gas on the platform, as proposed by Clearwater Port, an offshore platform alternative would not create the new visual

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The sentence has been revised to read, "However, if Clearwater Port were approved, Platform Grace would continue to be used, and auxiliary docking structures would be added to the platform. In addition, one or more LNG carriers would regularly be docked at the facility. Therefore, the presence of Platform Grace would continue to have a long-term aesthetic impact in the region as a whole."

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impacts associated with a large FSRU and three or more large and tall Moss Tanks (184 feet in diameter and 164 feet above the waterline when ballasted), like those on the FSRU. Visual impacts associated with LNG carriers at berth for an offshore platform would be temporary, i.e., they would exist only during the times when an LNG carrier was offloading whereas the FSRU and its large Moss tanks would be a permanent, immutable visual impact. Accordingly, the DEIR's statement that the "addition of berthing capability to the platform would also create a larger object in the view shed" is not a true statement for a project that does not include large Moss Tanks like the BHP FSRU. Accordingly, this statement should be deleted because an offshore platform with two berths (the same number as possible for the BHP FSRU) and no large Moss tanks would avoid the potentially significant impacts associated with the Moss tanks.

E. The DEIR Improperly Excludes From Full Consideration a New Platform Alternative at Locations Other Than BHP's Proposed FSRU Site, P. 3-25.

The DEIR acknowledges that a new offshore platform is a feasible alternative, and then attempts to dismiss a new platform as infeasible at the BHP site only:

As discussed above, a platform-based terminal could be designed to receive and regasify LNG and send the natural gas to shore via a pipeline; however, it would be technically infeasible to consider placing a platform *at the same location as that of the proposed Project* because, to date, fixed platforms have not been installed at the ocean depth of the proposed DWP location (approximately 2,900 feet [884 m]). To date, fixed platforms have been installed to water depths of 1,353 feet (412 m). Compliant (flexible) pile and compliant or guyed platforms have been installed in water depths to 1,753 feet (534 m). Only floating facilities have been installed to greater depths (Offshore Magazine 2005). (P. 3-25; emphasis added.)

The DEIR's reasoning is appropriate for dismissing a new platform alternative at the proposed site of the BHP FSRU; however, as discussed in the comment immediately above, CEQA's alternatives analysis demands a more rigorous examination of alternatives. Specifically, CEQA demands that a project examine a reasonable range of feasible alternatives to the project and the project *site*. (14 CCR 15126.6(a)-(f).)

The DEIR fails to discuss whether an alternative meeting most of BHP's basic project's objectives could be constructed at a site other than BHP's preferred project's site, i.e., a site where the water is shallower. CEQA dictates that, "If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the

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G006-42

Although a specific location was not evaluated, Section 3.3.8.1 discusses the potential of a fixed platform-based LNG terminal that would also have to be constructed closer to shore than the proposed Project location because of water depth limitations. The conclusions discussed in the document are that if new fixed platform-based terminal "were installed closer to shore within feasible water depths, the platform could create an additional navigational hazard in the Santa Barbara Channel, and the necessary safety zone would affect maritime commercial and recreational activities because it would be in a high vessel-traffic area. Given that a new platform would be fixed to the seafloor, the potential adverse effects of local seismic activity to the structure would be greater than the effects to a floating facility. Given that the potential environmental and safety effects would be greater than those of the proposed Project, this alternative was eliminated from further evaluation in this document."

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reasons in the EIR.” (14 CCR 15126.6(f)(2)(B).) Limiting a project alternative to the same site as the proposed project without considering alternative project sites is contrary to CEQA.

As noted in the DEIR, fixed platforms have been installed to water depths of 1,353 feet (412 m) and compliant (flexible) pile and compliant or guyed platforms have been installed in water depths to 1,753 feet (534 m); however, the DEIR fails to examine whether a fixed platform in shallower water at another site could meet the project’s basic objectives. The DEIR should be revised to examine other offshore sites where existing platform technology allows for construction of such platforms.

F. The DEIR Correctly Recognizes that a Platform-Based Alternative Is Feasible, P. 3-25.

Although the DEIR attempts to dismiss existing offshore platforms as a feasible alternative, in reality, the DEIR confirms that an offshore platform alternative is feasible. The DEIR states unequivocally that a platform-based alternative is feasible: “As discussed above, a platform-based terminal could be designed to receive and regasify LNG and send the natural gas to shore via a pipeline....” (P. 3-25.) Thus, the DEIR correctly acknowledges the feasibility of a platform-based LNG terminal. The only reason proffered for rejecting a platform-based LNG terminal is the lack of storage on the platform. However, as discussed above, offshore storage tanks are neither one of the basic project objectives of the BHP project nor an inherent advantage for offshore LNG terminals.

G. There is No Direct Correlation Between Distance to Shore and Water Depth, As Suggested by the DEIR, P. 3-25.

The DEIR states, “A fixed platform-based LNG terminal would also have to be constructed closer to shore than the proposed Project location. If one were installed closer to shore within feasible water depths, the platform could create an additional navigational hazard in the Santa Barbara Channel, and the necessary exclusion zone would affect many maritime commercial and recreational activities because it would be in a high vessel-traffic area.” This analysis incorrectly assumes a direct correlation between (a) water depth and (b) distance to shore. This direct correlation simply does not exist.

Water depths vary greatly up and down the California coastline. Water depths can also vary greatly in relatively short distances. For example, the BHP project eliminated the possible landfall locations connecting the FSRU to “existing SoCalGas facilities at Ormond Beach” in part due to the difficulty of crossing Hueneme Canyon: “Given the depth and geologic instability in the vicinity of this canyon, the only viable route is south of the canyon. This route would require the pipeline to be located in or near coastal shipping lanes. Therefore, these routes connecting to Ormond Beach were not considered.” (P. 3-43.) As discussed immediately above,

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A new fixed platform-based LNG terminal may be feasible in concept; however, as discussed in Section 3.3.8.1, it does not meet the purpose and objectives of the Project and potentially would have greater environmental and safety impacts than the proposed Project. However, as indicated previously, insufficient public information is available to make any determination in this regard.

G006-44

This alternative was eliminated from further consideration for multiple reasons and therefore it is not necessary to analyze in multiple locations. Sections 3.3.5, 3.3.6, and 3.3.7 contain an analysis of different locations of potential offshore LNG terminals. According to State CEQA Guidelines section 15126.6(a), “An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project.”

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the DEIR should be revised to examine other offshore sites where existing platform technology allows for construction of such platforms.

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H. The DEIR Should Discuss Seismic Activities Effects on the FSRU Mooring System and the Potential for Unmooring, P. 3-25.

The DEIR states, "Given that a new platform would be fixed to the seafloor, the potential adverse effects of local seismic activity to the structure would be greater than the effects to a floating facility." (P. 3-25.) However, this statement ignores the fact that the FSRU will also be "fixed to the seafloor." The DEIR should be revised to examine the potential environmental effects if seismic activities affecting the seafloor result in the FSRU becoming unmoored, given that the FSRU is unpropelled.

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Section 4.11 contains information on potential seismic and geologic hazards and mitigation measures to address such impacts. Impacts GEO-3 and GEO-4 contain information on potential impacts and mitigation related to earthquakes and related hazards. Appendices J1 through J4 contain additional evaluations of seismic hazards.

If the FSRU were to become unmoored, the patrolling tugboats could be used to hold it in place. "Disabled Vessels and Anchorage" in Section 4.3.1.4 contains information on this potential situation and the actions that would be taken if it were to occur.

I. Potential Opposition to An Alternative Project, P. 3-25.

The DEIR states, "Given the level of public opposition to the existing platforms in the Santa Barbara Channel, an equivalent or greater level of opposition to any new proposed platform would be anticipated." (P. 3-25.) CEQA demands an examination of a reasonable range of feasible alternatives. The DEIR cannot eliminate a new platform alternative as infeasible based on potential public opposition without applying the same standard to the proposed BHP project. Just as the DEIR cannot recommend disapproval of the BHP project based on public opposition to BHP, the DEIR cannot eliminate an alternative based on a subjective estimate of potential opposition to an alternative. This statement should be deleted from the DEIR.

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Although the statement provides a context in which such a proposal might be considered, it has been deleted.

J. The DEIR Should Include A Discussion of Ambient Air Vaporizers as an Alternative Vaporizer Technology, PP. 3-31 to 3-32.

Although the DEIR discusses intermediate fluid vaporizers and open-rack vaporizers, the document fails to discuss ambient air vaporizers ("AAVs"). AAVs are particularly well-suited for offshore platform applications. AAVs are generally available in two basic styles, the Natural Draft and the Forced Draft or Fan Assisted designs. Both styles are especially favored where simplicity is desired or when high reliability is required with a minimum of operator attention.

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Ambient air vaporizers were not analyzed because insufficient information is publicly available at this time about the application of this technology on a floating facility.

AAVs are extensively used where cryogenic fluids must be heated quickly and efficiently, without the need for combustion of fossil fuels to generate heat for vaporization process. Because these vaporizers/ heaters utilize ambient air, the maximum discharge gas temperature is limited to some delta below the ambient air temperature. As an example, for the AAVs utilized at Clearwater Port, the design temperature of the natural gas is approximately 0°F and account for approximately 80% of the total heat duty to warm the gas to the delivery temperature required by SoCalGas.¹⁴ If Clearwater were to use a vaporizer which generated all

¹⁴ The AAVs to be used by Clearwater are made in California by Cryoquip: <http://www.cryoquip.com/>.

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the heat required for vaporization by the combustion of natural gas, such as a SCV, Clearwater would need to burn 400% more fuel to generate the necessary heat, which would result in a 400% increase in CO2 and other emissions.

AAVs require relatively stable, moderate ambient conditions to allow for greater design efficiency and to ensure adequate air flow for the required heat load. This air flow must be unobstructed, and there must be adequate disengagement space to allow the chilled air to be removed from the area. In this respect, an offshore platform in a moderate climate is an excellent location for AAV utilization due to the ambient air conditions being tempered by the mass of open water and the elevated structure providing unobstructed airflow and ample disengagement space.

Cooling humid ambient air condenses out fresh water. Because the LNG is directly vaporized against the air, water that is condensed on the external surface of the vaporizer surface freezes, forming predominantly a frost layer on the fins and tubes. As the frost layer builds, performance of the vaporizer is reduced. For this reason, the vaporizers must be regenerated by switching off the vaporizer to allow the built-up ice to melt off of the vaporizer. The normal operations cycle for AAVs includes a LNG vaporization mode for 75 percent of the time and a regeneration (thawing) mode for 25 percent of the time. There are a total of 64 individual AAVs at the Clearwater facility, such that at the design flow rate and conditions, 48 will be in the vaporization mode, and 16 will be in the regeneration mode at any given time.

The Fan Assisted Ambient Air Vaporizer is most effectively employed when space is limited. The fans increase the external heat transfer coefficient allowing greater capacity, decreasing the required number of units when weight and space are important design considerations, such as on an offshore platform. The forced draft air flow also helps to reduce the regeneration cycle time. The DEIR should be revised to discuss AAVs as an alternative vaporizer technology.

K. The DEIR Should Include An Analysis To Support the Statements that the BHP FSRU Will Only be Visible from Shore “On Clear Nights If At All”, PP. 4.4-25, 4.20-27.

The DEIR states, “However, because of its remote location, the lighting could be seen from shore or from the Channel Islands only on clear nights if at all. The required beacon light would be less visible than the lighting on offshore platforms in the Santa Barbara Channel.” (P. 4.4-25; see also P. 4.20-27.) However, the DEIR provides no supporting facts or analysis for the contention that the BHP FSRU lighting will be seen from shore or from the Channel Islands “only on a clear night.”

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G006-48

Section 4.4.1.1 contains information about the visual aspects of the Project, including lighting at night. Impact AES-2 also discusses night lighting on the FSRU. Section 4.3 contains information on marine traffic associated with the proposed Project. Up to two LNG carriers would call on the FSRU weekly. Under normal operating conditions, the carriers would not be closer to shore than the FSRU, which is located farther from shore than the coastwise traffic lanes. Figure 4.3-9 shows LNG carrier approach routes. Up to six additional transits by service vessels would occur weekly between the FSRU and Port Hueneme, using the routes shown in Figure 4.3-15.

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The photo simulations published in the DEIR confirm that the FSRU can be seen from shore in daylight:

- Figure 4.4-13, “Simulated View of FSRU from near Leo Carrillo State Beach under Clear Weather Conditions” shows the FSRU clearly visible during daylight hours.
- Figure 4.4-14, “Simulated View of FSRU from near Leo Carrillo State Beach under Typical Marine Weather Conditions” again clearly shows the FSRU will be visible from shore during daylight hours.
- Figure 4.4-16, “View of Proposed FSRU Location from Point Dume under Clear Sky Conditions (KOP 13),” again shows the FSRU visible from shore during daylight hours.
- Figure 4.4-17, Simulated View of the FSRU from Point Dume under Typical Marine Conditions, shows the FSRU visible under daylight conditions.
- The DEIR states, “The FSRU would be visible from viewpoints at higher elevations such as Encinal Canyon or at the Malibu Civic Center” and the “...FSRU may be visible from Summit Peak on Anacapa Island, which is 930 feet (283 m) above sea level, although this is a Natural Research Area not open to recreational hikers.” (P. 4.4-23.)

Notwithstanding the facts that the FSRU can be seen from shore and that the FSRU and the LNG carriers berthed at the FSRU must have sufficient night lighting to satisfy all navigational safety requirements, the DEIR concludes without citation to any supporting evidence that the FSRU’s night lighting will be seen from shore “only on clear nights, if at all.” The DEIR should be revised to delete the claim that the FSRU will be seen only on clear nights, and an appropriate visual analysis should be performed that includes lighting on the FSRU and the LNG carriers berthed at the FSRU that is consistent with USCG and all other applicable nighttime lighting safety and navigation requirements. Moreover, the references to “the required beacon lighting” suggests that only beacon lighting will be necessary. This statement should be deleted from the DEIR.

L. The DEIR Incorrectly Analyzes Potential Impacts Associated With Onshore Power Sources, P. 3-33.

The DEIR acknowledges that the use of a power cable extending from an existing onshore power plant is technically feasible, but dismisses this option as being less environmentally preferable. (P. 3-33.) The DEIR correctly recognizes that the applicant need not pursue any alternative power sources so long as power generation associated with the project does not result in any significant unmitigated impacts; however, this discussion fails to acknowledge that any emissions associated with onshore generation would have to be fully mitigated by the powerplant owner in order for the onshore powerplant to obtain a permit to operate. The DEIR should be revised to reflect that onshore powerplants must fully offset their potentially significant impacts and thus there are no new significant impacts associated with shore based power. The DEIR should also be revised to substantiate the claim of significant line losses associated with a shore based power cable.

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Table 4.4-3 summarizes onboard lighting requirements applicable to the FSRU. As stated, the highest light on the FSRU would be a rotating beacon that would flash at least once every 20 seconds. This light is required to be the brightest light on the vessel; therefore all other lighting on the FSRU would have a shorter range. The beacon's effective range is about 10 NM, which would fall about 2 NM short of the nearest onshore observation point. Figure 4.4-18 presents a simulation of light visible on the FSRU from a mainland location. As discussed in Appendix F, the simulations were prepared with modeling software that uses mathematical formulae to determine and render a simulation that approximates real world conditions.

G006-50

Section 3.3.9.3 has been revised to indicate that mitigation of emissions would be necessary if they were generated in a non-attainment area.

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M. The DEIR Fails to Consider Potential Cumulative Air Quality Impacts of the BHP and Clearwater Port Projects, P. 4.20-23.

Although Clearwater believes that there will be no significant cumulative air quality impacts associated with the BHP and Clearwater Port projects, the DEIR should include a cumulative impacts analysis.

To begin, the DEIR correctly finds that the Clearwater Port project is reasonably foreseeable and thus must be included in the cumulative impacts analysis for the BHP project:

“A proposal by Crystal Energy to construct an offshore LNG terminal at Platform Grace will be evaluated in a separate EIS/EIR.
* * * Since [the Clearwater Port] could be licensed and could operate simultaneously with Cabrillo Port, it is appropriate to evaluate its potential effects within the context of cumulative impacts (see Section 4.20, “Cumulative Impacts Analysis”).” (P. 3-25.)

Thus, the DEIR correctly finds and concludes that the Clearwater Port project should be included in the DEIR’s consideration of cumulative impacts for the BHP project.

Despite this express finding and conclusion, the DEIR nevertheless then fails to actually perform the required cumulative air quality analysis:

If Crystal Energy’s proposed Clearwater Port were approved, the facility would emit air pollutants during construction and normal operation. Since the quantity and locations of these emissions have not been quantified, it is not possible to fully characterize associated air quality impacts. Potentially significant cumulative regional air quality impacts due to the Clearwater Port facility and the Project can be expected; however, these cumulative impacts are difficult to determine because an air analysis comparable to that done for the proposed Project has not been performed for the Clearwater Port Project. (P. 4.20-23.)

The DEIR discussion above is legally deficient. To begin, cumulative impacts analysis requires an analysis of reasonably foreseeable projects, so the fact that “an air analysis comparable to that done for the proposed Project has not been performed for the Clearwater Port Project” is wholly irrelevant. The very essence of a cumulative impacts analysis is to analyze existing and reasonably foreseeable future projects. Taken literally, the DEIR argues that it is not obligated to perform a cumulative air quality impacts analysis because the Clearwater Port project is not an

G006-51

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Section 4.20.1.1 contains information on the Clearwater Port Project. Section 4.20.3 analyzes the potential cumulative impacts of the Clearwater Port Project; however, cumulative impacts can only be evaluated for those resource areas for which there is sufficient information. Section 15130(b), State CEQA Guidelines, provides, in part, “The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness.” Little information is publicly available for the Clearwater Port Project. The analysis of cumulative impacts is therefore limited by that publicly available information. Without sufficient information, it is difficult to either meet the above standard or comply with section 15130(b)(4), that is, provide “A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available, and...” (emphasis added.)

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existing project. This logic fails to recognize that a cumulative impacts analysis requires consideration of future projects like Clearwater Port.

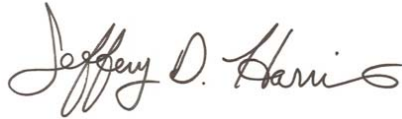
Having correctly determined that Clearwater Port is in the class of projects that must be considered in a sufficient cumulative air quality impacts analysis, the DEIR cannot simply dismiss away the cumulative impacts analysis because the analysis may be difficult. The DEIR is not free to pick and choose the disciplines it will subject to a proper cumulative impacts analysis and those it will ignore. Both CEQA and NEPA demand that the DEIR should be revised to include a legally sufficient cumulative air quality impacts analysis.

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CONCLUSIONS

Thank you for this opportunity to provide these comments on the DEIR. We look forward to revisions to the DEIR consistent with our comments herein.

Sincerely,

A handwritten signature in dark ink, appearing to read "Jeffery D. Harris". The signature is fluid and cursive, with the first name "Jeffery" being the most prominent.

Jeffery D. Harris
Greggory L. Wheatland
Attorneys for Clearwater Port, LLC